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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Adnan Alattar

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DIGIMARC CORPORATION
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EXAMINER

COUSO, JOSE L

ART UNIT

PAPER NUMBER

2621

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,564

Applicant(s)

ALATTAR ET AL.

Examiner

Jose L. Couso

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 31 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 13-21, 23-27 and 32-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 22 and 28-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 21-32 been renumbered 23-34. That is, there are two number 21 claims and two number 22 claims. The second number 21 claim has been renumbered 23. The second number 22 claim has been renumbered 24. Originally numbered claims 23-32 have been renumbered 25-34.

Applicant should refer to the newly numbered claims in all future communications and amendments in order to avoid confusion and to ensure proper entry.

Election/Restrictions

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
- I. Claims 1-12, 22 and 28-31, drawn to a method of encoding auxiliary data into a host signal, classified in class 382, subclass 100.
 - II. Claims 13-21 and 32-34, drawn to a method of authenticating a media object by using the frequency domain, classified in class 713, subclass 176.
 - III. Claims 23-27, drawn to an identification document, classified in class 283, subclass 113.

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3. The inventions are distinct, each from the other because of the following reasons:

Inventions in Group III and Groups I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the broadest combination claim does not include the details of the claims in the other Group. The subcombination has separate utility such as an encoder and an authentication device.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Mr. Joel Meyer April 14, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-12, 22 and 28-31. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-21, 23-27 and 32-34 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Detailed Action

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-12, 22 and 28-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-33 of U.S. Patent No. 6,700,990. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are directed towards similar subject matter including watermarks and content data.

8. Claims 1-12, 22 and 28-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-36 of U.S. Patent No. 6,675,146. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are directed towards similar subject matter including watermarks and content data.

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9. Claims 1-12, 22 and 28-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,647,129. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are directed towards similar subject matter including watermarks and content data.

10. Claims 1-12, 22 and 28-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-29 of U.S. Patent No. 6,611,607. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are directed towards similar subject matter including watermarks and content data.

11. Claims 1-12, 22 and 28-31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,590,997. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are directed towards similar subject matter including watermarks and content data.

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12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-3, 28 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Schwab et al. (U.S. Patent No. 5,134,496).

With regard to claim 1, Schwab discloses a bilateral anti-copying device for video systems which describes computing a content specific message dependent on the host signal (video software input to encoder 10 in figure 1); encoding the content specific message into a watermark signal (refer to column 2, lines 23-28); and embedding the watermark in the host signal such that the watermark signal is substantially imperceptible in the host signal (refer to column 2, lines 29-36).

As to claim 2, Schwab describes wherein the content specific message represents one or more salient features of the host signal (refer to column 6, lines 37-41).

In regard to claim 3, Schwab describes wherein the host signal comprises an image signal, and the salient features include spatial locations of the salient features (refer to column 6, lines 37-41; note that the encoding occurs in the luminance signals, so that the encoding occurs in the spatial domain for these video signal and therefore the salient features include spatial locations).

As to claim 28, Schwab describes computing a content specific message dependent on the host signal (video software input to encoder 10 in figure 1); encoding the content specific message into a watermark signal (refer to column 2, lines 23-28); and embedding the watermark in the host signal such that the watermark signal is substantially imperceptible in the host signal (refer to column 2, lines 29-36); wherein the content specific message includes data representing locations of one or more salient features of the host signal (refer to column 6, lines 37-41; note that the encoding occurs in the luminance signals, so that the encoding occurs in the spatial domain for these video signal and therefore the salient features include spatial locations).

With regard to claim 30, Schwab describes a decoder for decoding the locations of the salient features from the host signal that have been embedded into the host signal according to the method of claim 28, and for comparing the decoded locations with locations of features in the host signal to determine authenticity of the host signal (refer to column 8, lines 3-21).

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 4, 8-12, 22, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab et al. (U.S. Patent No. 5,134,496) in view of Wang et al. (U.S. Patent No. 5,337,361).

Schwab discloses a bilateral anti-copying device for video systems which meets a number of the limitations of the claimed invention, as pointed out more fully above.

Schwab does not expressly disclose that the image signal comprises a photo of a person as set forth in claim. Nor does it disclose the salient features include one or more of the following facial features of the person in the photo: eyes, nose, and mouth; wherein the photo is authenticated by decoding the spatial locations of the salient features from the watermark and comparing the decoded features with features in the photo.

Wang discloses a record with encoded data wherein the image signal comprises a photo of a person as set forth in claim which uses the salient features include one or more of the following facial features of the person in the photo such as the eyes, nose, and mouth (see figures 1A-C); wherein the photo is authenticated by decoding the spatial locations of the salient features from the watermark and comparing the decoded features with features in the photo (refer to column 4, lines 24-30 and column 7, line 63 through column 8, line 40) as recited in claims 4 and 29.

Schwab & Wang are combinable because they are both systems which are primarily concerned with the authorization and verification of image signals.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have the image signal comprise a photo of a person and to use the

facial features of the person in the photo such as the eyes, nose, and mouth for authentication purposes.

The suggestion/motivation for doing so would have been to validate or authenticate an image signal as suggested by Wang (refer to column 2, lines 13-15).

Therefore, it would have been obvious to combine Want with Schwab to obtain the invention as specified in claims 4 and 29.

As to claim 8, Wang describes wherein the host signal comprises a photo of a bearer of a photo identification document that is printed on the document (see for example figures 1A-C).

In regard to claim 9, Wang describes encoding a unique identifier (refer to column 5, line 55 through column 3, line 55) of the bearer in the watermark signal such that the photo identification document is authenticated by scanning the photo, decoding the unique identifier from the scanned photo, and comparing the unique identifier with an expected unique identifier for the bearer (refer for example to refer to column 10, lines 1-68).

With regard to claim 10, Want describes wherein the expected unique identifier is read from a different part of the photo identification document other than the photo (refer for example to refer to column 3, lines 58-64). This portion of the reference clearly expresses that other portions other than the photo can have the unique identifier.

As to claims 11 and 31, Wang describes the host signal is an image on an object, and the content specific message comprises a unique identifier associated with the bearer of the object (refer to column 4, lines 24-30).

With regard to claim 12, Wang describes a computer readable medium on which is stored software for performing the method of claim 1 (see figures 5-7, 9-11, 13 and 15-16).

With regard to claim 22, Wang describes an object bearing a host signal that has been encoded with auxiliary data according to the method of claim 1 (refer to column 4, lines 24-30).

16. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwab et al. (U.S. Patent No. 5,134,496) in view of Bloomberg et al. (U.S. Patent No. 5,337,361).

Schwab discloses a bilateral anti-copying device for video systems which meets a number of the limitations of the claimed invention, as pointed out more fully above.

Schwab does not expressly disclose wherein the content specific message comprises a semi-sensitive hash of the host signal, where the semi-sensitive hash is defined as a hash that remains substantially unchanged through digital to analog and analog to digital conversion of the host signal.

Bloomberg discloses an adaptive scaling for decoding spatially periodic self-clocking glyph shape codes which describes the content specific message comprises a semi-sensitive hash of the host signal, where the semi-sensitive hash is defined as a hash that remains substantially unchanged through digital to analog and analog to digital conversion of the host signal (see figures 3 and 3B).

Schwab & Bloomberg are combinable because they are both systems which are primarily concerned with the authorization and verification of image signals.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the content specific message which comprises a semi-sensitive hash of the host signal, where the semi-sensitive hash is defined as a hash that remains substantially unchanged through digital to analog and analog to digital conversion of the host signal.

The suggestion/motivation for doing so would have been to use an efficient and reliable code for applications in which machine readable data is to be recorded in visual juxtaposition with human readable information as suggested by Bloomberg (refer to column 2, lines 25-33).

Therefore, it would have been obvious to combine Schwab with Bloomberg to obtain the invention as specified in claims 5-7.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

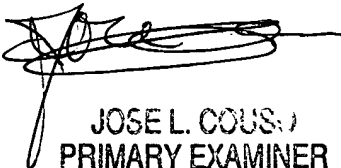
Rothfjell discloses a system using facial features for verification purposes. Bloomberg ('147) discloses another system using a hash. Spannenbur, Powell et al., Tsuji et al., Sanford, II et al., Honsinger et al. and Tefik et al. all disclose systems similar to applicant's claimed invention.

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18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose L. Couso whose telephone number is (703) 305-4774. The examiner can normally be reached on Monday through Friday from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8576.



JOSE L. COUSO
PRIMARY EXAMINER

Jlc
May 4, 2004